

# Notice of Allowability

Application No.

10/757,964

Examiner

Leon Flores

Applicant(s)

PUKKILA ET AL

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/4/2007.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

DAVID C. PAYNE

SUPERVISORY PATENT EXAMINER

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Anatoly Frenkel (Reg. No. 54,106) on 7/20/2007.

In the claims:

Re claim 1, line 24, 'synchronous or' has been changed to ---synchronous and---

A copy of above-mentioned amendments to claim 1 are also attached with the Office Action, which was faxed by the Attorney Mr. Anatoly Frenkel (Reg. No. 54,106) on 6/4/2007.

***Allowable Subject Matter***

2. Claims 1-21 are allowed.

3. The following is an examiner's statement of reasons for allowance:

The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with:

4. Re claim 1, the further limitation of, "a method comprising: receiving a radio signal by a receiver filter of the single antenna interference cancellation receiver and providing a filtered waveform signal to a joint channel estimator of a joint channel estimator module of the single antenna interference cancellation receiver; providing a

Art Unit: 2611

desired bit decision signal to the joint channel estimator module; and computing a desired impulse response estimate signal by the joint channel estimator using the filtered waveform signal, the desired bit decision signal and an interfering training sequence signal and an interfering training sequence delay signal generated without prior knowledge of a training sequence of the interfering co-channel signals for suppression of interfering co-channel signals, synchronous and asynchronous, in a single antenna interference cancellation receiver". Claims 2-12 depend on claim 1 above.

5. Re claim 13, the further limitation of, "a single antenna interference cancellation receiver comprising: a receiver filter of the single antenna interference cancellation receiver, responsive to a radio signal, configured to provide a filtered waveform signal; a means configured to provide a desired bit decision signal; and a joint channel estimator of the single antenna interference cancellation receiver, responsive to the filtered waveform signal, to the desired bit decision signal and to an interfering training sequence signal and an interfering training sequence delay signal generated without prior knowledge of training sequence of the interfering co-channel signal, configured to provide a desired impulse response estimate signal, wherein said single antenna interference cancellation receiver is for suppression of interfering co-channel signals, both synchronous and asynchronous". Claims 14-21 depend on claim 13 above.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Flores whose telephone number is 571-270-1201. The examiner can normally be reached on Mon-Fri 7-5pm Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LF  
July 20, 2007